IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

1. (currently amended) A method for producing protein ~~competent gene products~~ in human hepatocyte cells, said method comprising ~~the following steps~~:

providing ~~Providing~~ a DNA construct in which a gene encoding a protein of interest is operably linked to a modified heat-inducible promoter;[[,]]

introducing ~~Introducing~~ said DNA construct into a human hepatocyte cell line, either by transformation or by transfection, to form a transformed or transfected ~~host~~ cell line ~~lines~~, respectively; and

subjecting ~~Subjecting~~ said transformed or transfected ~~trasnfected~~ cell line ~~lines~~ to a transient increase in temperature and permitting protein ~~the~~ translation ~~to protein~~ to occur after the temperature has been returned to ~~normal~~ growth temperatures ~~of the said host cells~~, whereby the production of said protein of interest occurs.

2. (currently amended) The method of claim 1 ~~one~~ in which the modified heat-inducible promoter is the Hi-Hot promoter.

3. (currently amended) The method of claim 1 ~~one~~ where the human hepatocyte cell line is stably transfected with said DNA construct ~~a competent human hepatocyte cell line~~.

4. (currently amended) The method of claim 3 where the gene ~~expressed~~ encodes a therapeutic protein.

5. (currently amended) The method of claim 4 [[3]] where the therapeutic protein is selected from the group consisting of ~~gene expressed includes therepeutic genes such as~~ interferons, interleukins, blood clotting factors, insulins, growth hormone, urokinase, EPO, TPA, FSH, somatostatin, antibodies, DNAase, myoglobin, and pro- and anti-angiogenesis factors ~~and proteins of veterinary interest~~.

6. (currently amended) The method of claim 3 where the gene ~~expressed~~ encodes [[is]] a natural liver protein.

7. (new) The method of claim 3 where the gene ~~expressed~~ encodes a protein of veterinary interest.

8. (new) The method of claim 1 in which said DNA construct further comprises a Zeocin resistance gene or is selected by zeocin antibiotic.

9. (new) The method of claim 2 in which said DNA construct further comprises a Zeocin resistance gene or is selected by zeocin antibiotic.

10. (new) An expression vector, said vector comprising:
a bacterial origin of replication,
a Zeocin resistance gene selectable by zeocin antibiotic in both prokaryotic and eukaryotic cells, and
a heat-inducible promoter operably linked to a gene encoding a protein of interest.

11. (new) A method for producing protein in human hepatocyte cells, said method comprising:
providing a DNA construct in which a gene encoding a protein of interest is operably linked to a heat-inducible promoter,
introducing said DNA construct into an immortalized human hepatocyte cell line by stable transfection to form a stably transfected and immortalized cell line,
growing said stably transfected and immortalized cell line at a temperature, and
subjecting said stably transfected and immortalized cell line to a transient increase in the temperature to induce said promoter; thereby producing said protein of interest.

12. (new) The method of claim 11 in which the heat-inducible promoter is the Hi-Hot promoter.

13. (new) The method of claim 11 where the gene encodes a therapeutic protein.

14. (new) The method of claim 13 where the therapeutic protein is selected from the group consisting of interferons, interleukins, blood clotting factors, insulins, growth hormone, urokinase, EPO, TPA, FSH, somatostatin, antibodies, DNAase, myoglobin, and pro- and anti-angiogenesis factors.

15. (new) The method of claim 11 where the gene encodes a natural liver protein.

16. (new) The method of claim 11 where the gene encodes a protein of veterinary interest.

17. (new) The method of claim 11 in which said DNA construct further comprises a Zeocin resistance gene or is selected by zeocin antibiotic.

18. (new) The method of claim 12 in which said DNA construct further comprises a Zeocin resistance gene or is selected by zeocin antibiotic.